

Category	Sub-category	Value
A	1	1
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	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
B	1	1
	2	2
	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
C	1	1
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	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
D	1	1
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	3	3
	4	4
	5	5
	6	6
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	10	10
E	1	1
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	6	6
	7	7
	8	8
	9	9
	10	10
F	1	1
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	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
G	1	1
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	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
H	1	1
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	4	4
	5	5
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	7	7
	8	8
	9	9
	10	10
I	1	1
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	10	10
J	1	1
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	4	4
	5	5
	6	6
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	10	10
K	1	1
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	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
L	1	1
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	10	10
M	1	1
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	6	6
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	9	9
	10	10
N	1	1
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	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
O	1	1
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	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
P	1	1
	2	2
	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
Q	1	1
	2	2
	3	3
	4	4
	5	5
	6	6
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	10	10
R	1	1
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	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
S	1	1

inputting said optical signal into a first optical gate to suppress a space-level noise of said optical signal; and

2. A method according to claim 1, wherein said first optical gate has polarization independence.

4. A method according to claim 1, wherein said second optical gate comprises a limiter optical amplifier.

6. A method according to claim 1, further comprising the step of inputting probe light into said first optical gate.

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said probe light has a wavelength different from the wavelength of said optical signal input into said first optical gate; and

said optical signal output from said first optical gate has the same wavelength as the wavelength of said probe light.

8. A method according to claim 7, wherein said probe light is input into said first optical gate in the same direction as that of said optical signal input into said first optical gate.

9. A method according to claim 8, further comprising the step of separating said optical signal output from said first optical gate from said optical signal input into said first optical gate.

10. A method according to claim 6, wherein said probe light has the same wavelength as the wavelength of said optical signal input into said first optical gate.

11. A method according to claim 10, wherein said probe light is input into said first optical gate in a direction opposite to that of said optical signal input into said first optical gate.

12. A device for shaping the waveform of an optical signal, comprising:

first and second optical gates cascaded;

first and second optical gates cascaded;

said first optical gate receiving said optical signal to suppress a space-level noise of said optical signal;

said second optical gate receiving an optical signal output from said first optical gate to suppress a mark-level noise of said optical signal output from said first optical gate.

24. A system comprising:

an optical demultiplexer for receiving WDM signal light obtained by wavelength division multiplexing a plurality of optical signals to separate said WDM signal light into said plurality of optical signals;

a plurality of waveform shaping devices for receiving said plurality of optical signals output from said optical demultiplexer, respectively; and

an optical multiplexer for wavelength division multiplexing a plurality of optical signals output from said plurality of waveform shaping devices;

each of said waveform shaping devices comprising:

first and second optical gates cascaded;

said first optical gate receiving said optical signal input into each waveform shaping device to suppress a space-level noise of said optical signal;

said second optical gate receiving an optical
signal output from said first optical gate to suppress a
mark-level noise of said optical signal output from said
first optical gate.

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